What is claimed:

1. A method for use with a disk including zone bit recorded servo wedges, comprising:

(a) searching for a SAM pattern, within a servo wedge, at a first nominal frequency useful for searching for the SAM pattern if the servo wedge is within a first zone; and

(b) searching for the SAM pattern, within the same servo wedge, at a second nominal frequency useful for searching for the SAM pattern if the servo wedge is within a second zone.

2. The method of claim 1, wherein:

the first nominal frequency corresponds to the first zone; and

the second nominal frequency corresponds to the second zone, which is adjacent to the first zone.

3. The method of claim 1, wherein steps (a) and (b) occur simultaneously.

4. The method of claim 1, further comprising:

(c) selecting one detection of the SAM pattern, if the SAM pattern is found at both the first nominal frequency and the second nominal frequency in the same servo wedge.

5. The method of clam 4, wherein:

step (a) includes, if the SAM pattern is detected at the first nominal frequency, then determining at least one actual servo demodulation value corresponding to a detection of the SAM pattern at the first

nominal frequency;

step (b) includes, if the SAM pattern is detected at the second nominal frequency, then determining at least one actual servo demodulation value corresponding to the detection of the SAM pattern at the second nominal frequency; and

step (c) includes selecting one detection of the SAM pattern based at least in part on the actual servo demodulation values determined at steps (a) and (b), if the SAM pattern is found at both the first nominal frequency and the second nominal frequency in the same servo wedge.

6. The method of claim 1, further comprising:

(c) determining which one of two zones a head is reading, based at least in part on which nominal frequency was used to successfully detect the SAM pattern in one of steps (a) and (b).

7. The method of claim 1, further comprising:

(c) determining which one of two zones is being read, based at least in part on which nominal frequency was used to successfully detect the SAM pattern in one of steps (a) and (b).

8. A method for use with a disk including zone bit recorded servo wedges, comprising:

(a) searching for a SAM pattern, within a servo wedge, at a first nominal frequency useful for searching for the SAM pattern if the servo wedge is within a first zone, and at a second nominal frequency useful for searching for the SAM pattern if the servo wedge is within a second zone;

(b) for each detection of the SAM pattern in the servo wedge, charactering the detection as

a good SAM detection or a bad SAM detection; and

(c) if a detection of the SAM pattern is characterized as a good SAM detection, then performing further servo functions based at least in part on the detection of the SAM pattern this is characterized as the good SAM detection.

9. The method of claim 8, wherein step (c) includes using at least one servo demodulation value corresponding to the good SAM detection for servo control.

10. The method of claim 8, wherein step (c) includes searching for the SAM pattern in a next servo wedge based at least in part on when or where the SAM pattern, corresponding to the good SAM detection, was detected.

11. The method of claim 8, wherein step (c) includes:

using a servo demodulation value corresponding to the good SAM detection for servo control; and

searching for the SAM pattern in a next servo wedge based at least in part on when or where the SAM pattern, corresponding to the good SAM detection, was detected.

12. The method of claim 8, wherein if more than one detection of the SAM pattern in the servo wedge is characterized as a good SAM detection, then step (c) includes,:

selecting one of the detections as the best good SAM detection; and

performing further servo functions based at least in part on the best good SAM detection.

13. The method of claim 12, wherein step (c) includes searching for the SAM pattern in a next servo wedge based at least in part on when or where the SAM pattern, corresponding to the best good SAM detection, was detected.

14. The method of claim 12, wherein step (c) includes:

using a servo demodulation value corresponding to the best good SAM detection for servo control; and

searching for the SAM pattern in the next servo wedge based at least in part on when or where the SAM pattern, corresponding to the best good SAM detection, was detected.

15. The method of claim 8, further comprising:

(d) if the SAM pattern in not detected in the servo wedge, then searching for the SAM pattern in a next servo wedge based at least in part on when or where a detection of the SAM pattern, that was characterized as a good SAM detection, occurred in a previous servo wedge.

16. The method of claim 8, further comprising:

(d) if two of the SAM patterns are detected in the same servo wedge, but only one detection of the SAM pattern in the servo wedge is characterized as a good SAM detection, then searching for the SAM pattern in a next servo wedge based at least in part on where or when the SAM pattern, that was characterized as the one good SAM detection, was detected.

17. The method of claim 8, further comprising:

(d) if no detection of the SAM pattern in the servo wedge is characterized as a good SAM detection, then searching for the SAM pattern in a next servo wedge based at least in part on when or where the SAM pattern, that was characterized as a good SAM detection, was detected in a previous servo wedge.

18. The method of claim 8, further comprising:

(d) if no detection of the SAM pattern in the servo wedge is characterized as a good SAM detection, then halting reading data from and writing data to data fields following the servo wedge.

19. The method of claim 18, further comprising:

(e) if no detection of the SAM pattern in the servo wedge is characterized as a good SAM detection, then searching for the SAM pattern in a next servo wedge based at least in part on when or where the SAM pattern, that was characterized as a good SAM detection, was detected in a previous servo wedge.

20. The method of claim 8, wherein step (b) includes comparing at least one actual servo demodulation value corresponding to each detection of the SAM pattern to at least one predicted servo demodulation value to characterize each detection as either a good SAM detection or a bad SAM detection.

21. A method for improving servo-demodulation robustness, comprising:

simultaneously searching for a servo address mark (SAM) pattern, within a servo wedge, using a plurality of different nominal frequencies.

22. The method of claim 21, wherein the servo wedge is zone bit recorded.

23. The method of claim 21, wherein the plurality of nominal frequencies comprise two nominal frequencies.

24. The system of claim 21, wherein the plurality of nominal frequencies comprise more than two nominal frequencies.